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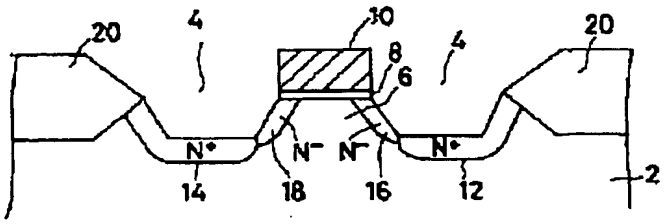
TITLE : SEMICONDUCTOR DEVICE AND MANUFACTURING METHOD THEREOF



ABSTRACT : PURPOSE: To lessen the short channel effect by suppressing the extension of a depletion layer within a MOS transistor in the structure wherein recessions are formed in a substrate while the substrate on a gate electrode forming part is raised.

CONSTITUTION: Recessions 4a are formed in source/drain regions in a P type silicon substrate 2 while a channel forming part becomes a raised part 6a on whose crest part a gate electrode 10 is formed through the intermediary of a gate oxide film 8. On the other hand, high doped source.drain regions 12, 14 are formed on the bottom parts of the recessions 4a while low doped source.drain regions 16, 18 are formed on the sides of the raised part 6a so as to form an LDD structured MOS transistor. Furthermore, a P type impurity diffused regions 26 in the same conductivity type as that of the substrate 2 but higher impurity concentration than that of the substrate 2 is formed in the deep position of the raised part 6a so as to suppress the extension of a depletion layer.